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Spectral Study of Flavonoids from Combretum Glutinosum Leaves

A Thesis Submitted in Partial Fulfillment of the Requirements for M.Sc. Degree in
Industrial Chemistry

By

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Dedication

To my mother who have always been a constant source of support and encouragement during the challenges of my whole college life.

To my father for standing beside me.

To my grandmother zeinb, uantMuniera, for allowing me to follow my ambitions throughout my childhood.

To my kind husband he has been my inspiration and motivation for continuing to achieve my dream.

To my kind sister Nahed

To my wonderful children:

To my lovely frinds

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ABSTRACT

In this study *Combretum Glutinosum* leaves were extracted using ethanol, chloroform, ethyl acetate, n-butanol .The conformatory testes showed up the presence of flavoniods, alkaloids, steroids, Tannins, and glycosids The study focused on the extraction of flavoniods, by thin layer chromatography the research emphasized the presence of flavoniod compound.using analytical spectroscopy such as IR and UV spectroscopy the compound were determined and they my be isoflavone.

مستخلص البحث

تم في هذه الدراسة استخلاص اوراق شجرة الهبيل باستخدام الايثانول ، والكلوروفورم ، والايثيل اثنيت ، والبيوتانول ومن ثم اخضاع المستخلص بالتجارب التاكيدية اللازمة وتوصلت الدراسة الي وجود الفلافينويدات ، القلويدات ' والاسترويدات ، والجليكوسيدات والتانينات.وركزت الدراسة علي استخلاص الفلافينويدات ، وباستخدام كروماتوغرافيا الطبقة الرقيقة تاكدت الدراسة من وجود مركب فلافونويدي.استخدم في هذه الدراسة التحليل الطيفي مثل مطيافية الاشعة تحت الحمراء والاشعة فوق البنفسجية وتم الحصول علي مركب فلافونويدي يمكن ان يكون ايزو فلافون.

Chapter one

1.1 INTRODUCTION

Plants produce an enormous variety of natural products with highly diverse structures. These products are commonly termed “secondary metabolites” in contrast to the “primary metabolites” which are essential for plant growth and development. Secondary metabolites were formerly regarded as “waste products” without physiological function for the plant. With the emergence of the field of chemical ecology about 30 years ago, it became evident, however, that these natural products fulfill important functions in the interaction between plants and their biotic and abiotic environment. They can serve, for example, as defense compounds against herbivores and pathogens, as flower pigments that attract pollinators, or as hormones or signal molecules. In addition to their physiological function in plants, natural products also have a strong impact on human culture and have been used throughout human history as condiments, pigments, and pharmaceuticals ^[1].

Plants produce a wide array of natural products (secondary metabolites). These compounds have important ecological functions, providing protection against attack by herbivores and microbes and serving as attractants for pollinators and seed dispersing agents. They may also contribute to competition and invasiveness by suppressing the growth of neighbouring plant species (a phenomenon known as allelopathy). Humans exploit natural products as sources of drugs, flavouring agents, fragrances and for a wide range of other applications. Rapid progress has been made in recent years in understanding natural product synthesis, regulation and function and the evolution of metabolic diversity. It is timely to bring this information together with contemporary advances in chemistry, plant biology, ecology, agronomy and human health to provide a comprehensive guide to plant-

derived natural products. Plant-derived natural products: synthesis, function and application provides an informative and accessible overview of the different facets of the field, ranging from an introduction to the different classes of natural products through developments in natural product chemistry and biology to ecological interactions and the significance of plant-derived natural products for humans^[1].

1.2 Objectives

The objectives of this present study are as follows:

1. To investigate the fractional test of the *Combretum Glutinosum* crude extract.
2. To Isolation and Identification the Chemical Components of *Combretum Glutinosum*
3. To analyze the Components of the Isolated Compounds from the *Combretum Glutinosum* using IR and UV.